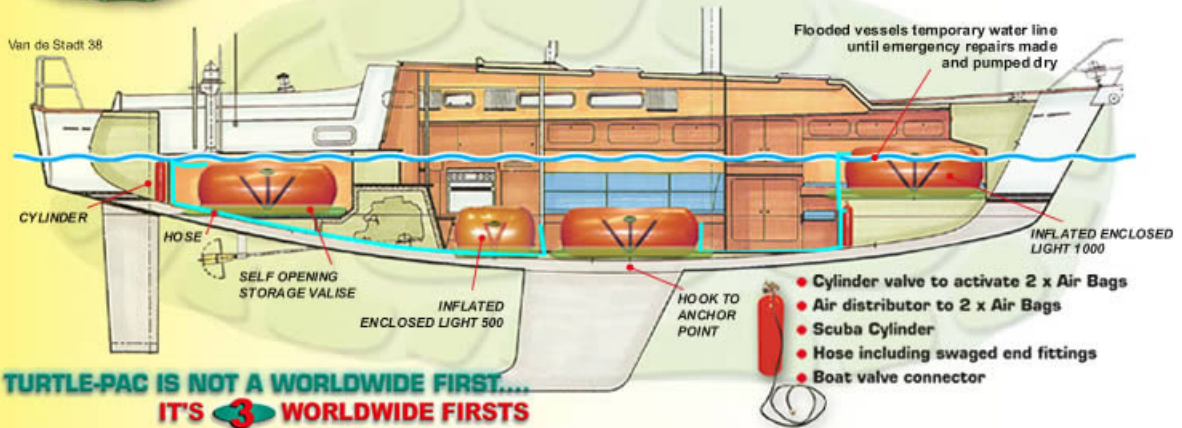




# YACHT FLOATATION KIT



**TURTLE-PAC IS NOT A WORLDWIDE FIRST... IT'S 3 WORLDWIDE FIRSTS**



**EL 1000** inflated in 40 seconds. Conforms to the space allowed.  
*Note:* relief valve to control pressure and dump excess air

**EL 500** stored under the V. berth fill in NEITHER the V. berth nor the floor area is reduced. *NOTE:* U bolt anchor point (backed by metal plate inside locker).

**EL 1000** stored out of the way Q. berths usability is NOT reduced. Hooked to anchor point a chain fibre glassed heavily to the hull (not visible).

**EL 500** inflated in 30 seconds. Conforms to the space allowed.  
*Note:* air hose leads to cylinder stored in locker



**1 FOR THE FIRST TIME!**  
Using the Turtle-Pac Floatation System sinking yachts will not only float but are capable of sailing and motoring to safety.

Fastnet Race in 1979 claimed 11 lives.  
Tokyo-Guam Yacht Race in 1992 had 15 fatalities.  
Sydney-Hobart 1998, 6 sailors lost their lives.  
Other lives have been lost when yachts have been sunk by hitting logs, whales or reefs.

**MANY OF THESE LIVES COULD HAVE BEEN SAVED!**



## GAIN TIME

- ▲ TO REPAIR....
- ▲ TO PUMP OUT...
- ▲ TO BE FOUND..
- ▲ TO SURVIVE...



**2 FOR THE FIRST TIME!**  
A grounded yacht's hull can be forced over to free the keel.  
**It's EASY.... and takes only a few minutes.**

Photo: Two tonne yacht heeled over by an EL 1000 reducing draft. The rope has been passed under the hull and secured to the port side.

Photo: Test vessel supported by two (2) EL1000s. Yacht has four (4) holes in the bottom.



**3 FOR THE FIRST TIME!**  
 Deep draft yachts have access to shallow... **PORTS - RIVERS - CANALS** around the globe.

To lift a yacht:

- 1 Drop two ropes off the bow and two off the stern, one end starboard and the other port side. Pull the ropes clear of the rudder and propeller under the hull to the keel or under the keel in case of long keel vessels.
- 2 Secure one lift bag to each rope ie two per side.
- 3 Pull the opposite side of each rope till the lift bag is immersed and then secure the ropes to a strong point. It may be necessary to use blocks to lead the ropes to a cleat or winch.
- 4 Inflate the lift bags with a scuba cylinder. The bags will conform to the hull shape and push firmly against the hull. It is safe to motor at up to 5 knots in calm waterways using this method.

Use of this system will enable yachts to short cut Gibraltar via the Canal du Midi and the Bay of Biscay via the Rhone. Avoid ocean conditions via the US Intracoastal Waterways...



Photo: 7 ton yacht lifted 0.3m (1ft) by four (4) EL500s to reduce the draft



## ENCLOSED LIGHT 250 - 500 - 1000

(For yacht floatation kit)



**TOUGH COMPACT LIFT BAGS.** Ideal for shallow depth lifts and surface floatation as they can be secured hard against the object to be supported or raised.

The unique single tie point set up does not require a spreader bar and suits emergency uses such as yacht floatation or rescue tasks.

ALL LIFT BAGS ARE MANUFACTURED FROM A UNIQUE FABRIC consisting of an immensely strong Nylon Weave Core which is double thick coated with P.V.C. for wear resistance.

MAINTENANCE FREE WELDED SEAMS

QUALITY ASSURANCE CONFORM TO AS/NZS 9001 : 2000

STANDARD SIZES:					
LIFT CAPACITY		LENGTH		DIAMETER	
Kg	Lb	metres	inches	metres	inches
250	551	0.90	35	0.61	24
500	1102	1.05	41	0.78	31
1000	2204	1.78	70	0.85	33

INFLATING / DEFLATING BOAT VALVE  
 RELIEF VALVE  
 INFLATING / DEFLATING BOAT VALVE



Photo EL 1000

**SINGLE TIE POINT - NO SPREADER BAR REQUIRED**

OPTIONAL: 3/4" valves with Kamlock - Boat valve hose connector - scuba cylinder holder and self opening valve to operate as self contained units.



## HOW MANY TURTLE-PACS TO KEEP A FLOODED YACHT AFLOAT?

1. Ascertain the various materials weight in your vessel as accurately as possible
2. Apply the example below using your vessels weight breakdown.

A modern 40 foot Fibreglass Yacht

MATERIAL	WEIGHT Kg	MULTIPLY BY BUOYANCY FACTOR	BUOYANCY NEEDED TO FLOAT Kg
Design displacement unloaded	8000		
Ballast lead	-3400	x 0.92	= 3128
Engine steel	-200	x 0.68	= 176
Batteries lead	-60	x 0.92	= 55
Hull incl. wood fit out	4340	x 0.33	= 1432
Anchor & chain	200	x 0.68	= 176
Stores (food, books etc)	various	1000	= 500
		ADD 25%	5467
			1367

**BUOYANCY REQUIRED TO KEEP FLOODED BOAT AFLOAT: 6834 Kg (15066lbs)**  
 Seven Turtle-Pac EL 1000 models will be required.  
 For inflation: 3 x 80 cu ft & 1 x 40 cu ft cylinders will be needed.

TURTLE-PAC SPECIFICATIONS METRIC:

LIFT CAPACITY	LENGTH	DIAMETER	WEIGHT	PACKED SIZE
500kg	1.05m	0.78m	3.5kg	Valise 0.49 x 0.32 x 0.1m
1000kg	1.78m	0.85m	6.0kg	Valise 0.78 x 0.32 x 0.1m (Long Bunk Side Valise) 1.59 x 0.24 x 0.1m

TURTLE-PAC SPECIFICATIONS IMPERIAL:

LIFT CAPACITY	LENGTH	DIAMETER	WEIGHT	PACKED SIZE
1102 lbs	41in	31in	8lb	Valise 19 x 12 x 4in
2204 lbs	70in	33in	13lb	Valise 31 x 12 x 4in (Long Bunk Side Valise) 63 x 9 x 4in

Buoyancy Factor =  $\frac{\text{Submerged weight}}{\text{Deadweight in air}}$

BUOYANCY FACTOR:	MATERIAL	MULTIPLY BY	MATERIAL	MULTIPLY BY
Fibreglass	0.33	Lead	0.92	
Aluminium	0.63	Foam (foats)	27.5	
Steel	0.88	Wood (foats)	see notes	

NOTE:

**WOOD:** Most wooden hulls will float their own weight and provide some additional buoyancy. To ascertain the amount of positive lift will require the breakdown of the Epoxy, fibreglass sheeting and the metal fastenings weight as they are part of the hull. Then ONLY use the wood portion of the vessel assumed to be under water in emergency. Not the deck areas.

**ADDITIONAL BUOYANCY CAN BE GAINED BY:**

Cookpit, drains closed and baled dry, can be very efficient flotation and shelter for the crew.  
 Water or Fuel Tanks only partially full - some tanks can be pumped empty.  
 Foam filled or airtight lockers - watertight bulkheads / doors and closed cell foam bunk cushions.

Alternatively send your vessels design and weight details to Turtle-Pac for a detailed recommendation for your consideration.